

U.S. Pat. Ser. No. 09/977,832
March 28, 2006
Page 2 of 8

Amendments to the Claims:

1-17 (cancelled)

18. (presently amended) A data communications adapter apparatus for coupling a host computer to a computer network employing communications media, the data comprising:

ethernet control circuitry;

a host interface configured to exchange data with said host computer;

a transceiver coupled to receive and transmit data over the media;

data transmit control circuitry responsive to said ethernet control circuitry and coupled to said transceiver, to said transmit data buffer, and to said host interface, for generating a packet transmit signal causing said transceiver to begin transmitting data from said transmit data buffer over said communications media;

a receive data buffer coupled to said host interface; and

data receive control circuitry responsive to said ethernet control circuitry and coupled to said transceiver, to said receive data buffer, and to said host interface, for storing data received by said transceiver in said receive data buffer, and for generating a receive interrupt ~~signaling~~ signalling to said host computer that data has been received by said transceiver, wherein said data receive control circuitry is operative to generate a receive interrupt once said transceiver has received over said communications media a predetermined number of bytes of a data packet less than all of said data packet.

19. (presently amended) The adapter of Claim 18, wherein said ethernet control circuitry, said host interface circuitry, and said data receive control circuitry, said data transmit control circuitry, said receive data buffer and said transmit data buffer are all contained in a single Application Specific Integrated Circuit (~~ASIC~~ ASIC).

20. (original) The adapter of Claim 18, wherein said data receive control circuitry is programmable.

21. (original) The adapter of Claim 18, wherein said data transmit control circuitry is programmable to generate said packet transmit signal when said transmit data

U.S. Pat. Ser. No. 09/977,832
March 28, 2006
Page 3 of 8

buffer contains a predetermined number of bytes of a data packet less than all of said data packet.

22. (previously presented) A method of transferring a packet of data from a computer network communications media through an adapter to a host computer, said method comprising the steps of:

- receiving from said communications media through a transceiver and storing in an adapter receive buffer a predetermined first receive threshold number of bytes of said packet;

- generating a first early receive interrupt from said adapter to said host computer;

- adjusting said receive threshold according to said length of said packet;

- continuing to receive from said communications media through said transceiver and store in an adapter receive buffer bytes of said packet;

- thereafter generating a second early receive interrupt from said adapter to said host computer, prior to complete reception of said data packet; and

- storing from said communications media through said transceiver and storing in said adapter receive buffer a remainder of said packet;

- wherein said host computer employs a driver allowing for early indications and having an early lookahead size, and wherein said step of receiving a predetermined first receive threshold number of bytes comprising receiving a number of bytes substantially equal to said early lookahead size.

23. (presently amended) The method of Claim 22, wherein said adapter and said host computer together have an interrupt latency time, said method further comprising after said step of receiving a predetermined first receive threshold number of bytes, the step of continuing to receive from said communications media through said transceiver and store in an adapter receive buffer bytes of said packet, wherein said step of receiving a predetermined first receive threshold number of bytes further comprises receiving a predetermined first receive threshold number of bytes substantially equal to said early ~~lookahead~~ lookahead size less a predetermined data receive rate times said interrupt latency time.

U.S. Pat. Ser. No. 09/977,832
March 28, 2006
Page 4 of 8

24. (original) The method of Claim 23, further comprising, after the step of generating said first interrupt, the steps of

a) evaluating the number of bytes stored in said adapter receive buffer against said early lookahead size; and

b) adjusting said receive threshold if said evaluating step does not indicate substantial equality.

25-28 (cancelled)

29. (new) The adapter of claim 18 wherein the receive data buffer is a ring buffer connected to the host interface via a DMA channel.